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Examiner: Phu Vu
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FROM: Walter C. Grollitsch

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ORIGINAL TO FOLLOW? ☐ YES ☒ NO

PRE-APPEAL BRIEF REQUEST FOR REVIEW, NOTICE OF APPEAL, PETITION FOR ONE-MONTH EXTENSION OF TIME, AND REMARKS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

TITLE: Liquid Crystal Device and Method For Optical Performance Monitoring In Fiber Optic Communication Systems
U.S. SERIAL NO.: 10/637,115
CUSTOMER NO.: 47389
FILING DATE: August 8, 2003
INVENTOR: Haijun Yuan, et al.
CONFIRMATION NO.: 3827

PATENT
Atty. Dkt. No. AVAN/001106

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Haijun Yuan, et al.

Serial No.: 10/637,115

Confirmation No.: 3827

Filed: August 8, 2003

For: LIQUID CRYSTAL DEVICE AND METHOD FOR OPTICAL PERFORMANCE MONITORING IN FIBER OPTIC COMMUNICATION SYSTEMS

Group Art Unit: 2871

Examiner: Phu Vu

Customer No.: 47389

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Dear Sir:

REMARKS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

In conjunction with the Notice of Appeal filed herewith, Applicants request a Panel review of the Final Rejection in this matter. Although the remarks herein are focused on specific issues raised by the rejection, nothing in this paper is meant to limit the scope of any arguments, either factual or legal, that Applicants may later present in a full appeal brief.

QUESTION FOR REVIEW

Applicants request a pre-appeal brief conference review to address the legal deficiency in making the rejections needed for a prima facie obviousness rejection. In a Final Office Action dated August 10, 2006, the Examiner finally rejected all the pending claims under 35 U.S.C. § 103(a). Applicants respectfully submit that the Examiner has failed to properly establish the essential elements needed for a *prima facie* rejection due to clear errors in the Examiner's rejections.

REMARKS

In the Final Office Action, the Examiner rejected claims 1, 7, and 11 as being obvious over Silberberg, U.S. Publication No. 2003/0194165, in view of Bouevitch, U.S. Publication No. 2003/0035605. However, the prior art references when combined fail to teach or suggest all the claim limitations.

According to MPEP 2143, to establish a *prima facie* case of obviousness the prior art reference (or references when combined) must teach or suggest all the claim limitations. Claim 1 includes the limitation of a liquid crystal tunable filter for receiving and processing a P-polarization beam and a rotated S-polarization beam from a C-polarizer. Silberberg does not disclose this limitation. In contrast, Silberberg merely discloses a filter "300" having an optical assembly "310" that receives an incident optical signal "315" from an input fiber "320", an optical assembly "325" that collects and provides a filtered optical signal "330" to fiber "335", and a plurality "340" of independently tunable filters "341-344". The filter "300" is configured such that one tunable filter "342" receives and processes a first polarization beam "313" and another tunable filter "344" receives and processes a second polarization beam "313" (see Silberberg, Figure 20). In fact, Silberberg clearly states that each tunable filter "341-344" is located along a different optical path (see Silberberg, paragraph 0113).

Moreover, claim 1 includes the limitation that the beam waists of the P-polarization beam and the rotated S-polarization beam are located substantially on a center of a liquid crystal cavity in a liquid crystal tunable filter. Silberberg does not disclose this limitation. As previously discussed, Silberberg discloses the use of a separate tunable filter for each polarization beam.

Thus, Silberberg cannot disclose that the beam waists of the P-polarization beam and the rotated S-polarization beam are located substantially on a center of a liquid crystal cavity in a liquid crystal tunable filter. As explained in past responses, the specification of the present application makes clear that locating the beam waists on the center of the liquid crystal cavity reduces the parallelism requirement for a liquid crystal cavity, which is a stated advantage of the present invention (see Application page 7, line 18-page 8, line 4).

In addition, Bouevitch merely states that an increased channel bandwidth is observed if a beam waist is focused on a liquid crystal cell. There is no teaching in Bouevitch about two different beams being filtered through the same liquid crystal tunable filter or that the beam waists of the two beams are located substantially on a center of a liquid crystal cavity in the liquid crystal tunable filter. As such, Bouevitch fails to cure the deficiencies of Silberberg.

Claims 7 and 11 include the limitation of scanning to filter the spectral information of the first beam and the second beam by a liquid crystal tunable filter, wherein the first beam and the second beam are separate from one another, and beam waists of the first beam and the second beam are located substantially on a center of a liquid crystal cavity in the liquid crystal tunable filter. Silberberg clearly does not disclose this limitation. As set forth above, Silberberg discloses a separate tunable filter for each polarization beam and therefore Silberberg cannot disclose scanning to filter the spectral information of the first beam and the second beam by a liquid crystal tunable filter, as recited in claims 7 and 11. Moreover, as previously set forth, Silberberg cannot disclose that the beam waists of the first beam and the second beam are located substantially on a center of a liquid crystal cavity in the liquid crystal tunable filter, as recited in claims 7 and 11. Again, Bouevitch fails to cure the deficiencies of Silberberg.

As the foregoing illustrates, the combination of Silberberg and Bouevitch fails to teach or suggest all the limitations of claims 1, 7, and 11. Therefore, the combination of Silberberg and Bouevitch fails to render claims 1, 7, and 11 obvious. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 1, 7, and 11. Additionally, since claims 3-6 depend from claim 1, claims 8-10 depend from claim 7, and claims 12-14 depend from claim 11, these claims are allowable for at least the same reasons as claims 1, 7, and 11.

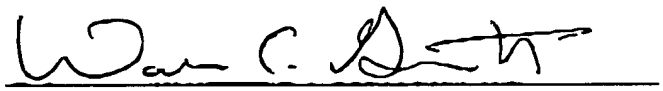
In the Final Office Action, the Examiner also rejected claims 5 and 6 as being obvious over Silberberg in view of Bouevitch and further in view of Tsai, U.S. Publication No. 2002/0122444. However, the prior art references when combined fail to teach or suggest all the

claim limitations. Claims 5 and 6 depend from claim 1. As set forth above, the combination of Silberberg and Bouevitch fails to render claim 1 obvious. Tsai merely discloses a light detection unit that may include photodiodes, photodiode arrays, bi-cells, and particularly quad-photocells and thus, Tsai fails to cure the deficiencies of the combination of Silberberg and Bouevitch and this failure precludes the combination of Silberberg and Bouevitch and Tsai from rendering claims 5 and 6 obvious. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 5 and 6.

CONCLUSION

Applicants believe that the foregoing discussion demonstrates the patentability of the present claims over the cited references. Accordingly, Applicants request that the Panel vacate the rejections and remand the matter to the Examiner with instructions to allow the present claims.

Respectfully submitted,



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